

# Cancer Care Ontario Practice Guidelines Initiative

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Ontario Ministry of Health and Long-Term Care



## Accelerated Radiotherapy for Locally Advanced Squamous Cell Carcinoma of the Head and Neck

### Practice Guideline Report # 5-6c

**ORIGINAL GUIDELINE: November 27, 2000**  
**MOST RECENT LITERATURE SEARCH: October 2002**  
**NEW EVIDENCE ADDED TO GUIDELINE REPORT: October 2002**

New evidence found by update searches since completion of the original guideline is consistent with the original recommendations.

### SUMMARY

#### Guideline Questions

Does accelerated radiotherapy improve loco-regional control or survival compared with conventionally fractionated radiotherapy in patients with newly diagnosed, locally advanced (stage III-IV) squamous cell carcinoma of the head and neck who are deemed suitable for radiotherapy with curative intent? What is the toxicity associated with accelerated fractionation? Can these novel regimens enhance the therapeutic ratio comparing benefits to toxicity?

#### Target Population

These recommendations apply to adult patients with newly diagnosed, locally advanced (stage III-IV) squamous cell carcinoma of the head and neck (SCCHN) who are deemed suitable for radical radiotherapy with curative intent.

#### Recommendations

##### **Key Recommendations**

- This group of patients should be considered for concomitant chemotherapy and conventional radiation as recommended in Cancer Care Ontario Practice Guideline Initiative guideline #5-6a.
- It would be reasonable to offer modestly accelerated radiotherapy to patients with locally advanced (stage III and IV) disease who are not candidates for concomitant chemotherapy and conventional radiation.
- Rapid acceleration of radical radiotherapy cannot be recommended as standard therapy.

##### **Qualifying Statements**

- The emerging evidence suggests that modestly accelerated radiotherapy can improve loco-regional control compared with conventional radiotherapy. Overall survival may be enhanced. Although the improvements in loco-regional control and survival are promising, longer follow-up and more complete information on late complications will be needed to

meaningfully compare these results to those achieved with concomitant chemoradiation in locally advanced SCCHN.

### **Methods – updated with latest search dates**

Entries to MEDLINE (1966 through November 2000), CANCELIT (1983 through September 2000) and Cochrane Library (2000 Issue 3) databases and abstracts published in the proceedings of the annual meetings of the American Society of Clinical Oncology and the American Society for Therapeutic Radiology and Oncology were systematically searched for evidence relevant to this practice guideline report. An update search was conducted in October 2002.

Evidence was selected and reviewed by two members of the Cancer Care Ontario Practice Guidelines Initiative's Head and Neck Cancer Disease Site Group and methodologists. This practice guideline report has been reviewed and approved by the Head and Neck Cancer Disease Site Group, which comprises medical and radiation oncologists, surgeons, and a community representative.

External review by Ontario practitioners was obtained through a mailed survey. Final approval of the original guideline report was obtained from the Practice Guidelines Coordinating Committee. The Cancer Care Ontario Practice Guidelines Initiative has a formal standardized process to ensure the currency of each guideline report. This process consists of a periodic review and evaluation of the scientific literature and, where appropriate, the integration of this literature with the original guideline information.

### **Key Evidence**

- Rapid acceleration of radical radiotherapy results in excessive normal tissue toxicity. This can be minimized by reducing the total dose (as in the continuous hyperfractionated accelerated radiotherapy [CHART] regimen) or introducing a treatment interruption (as in the split-course protocols of the European Organization for Research and Treatment of Cancer trial 22811 and the Radiation Therapy Oncology Group trial 9003) but at the expense of tumour control. These regimens have not proven superior to conventional fractionation in terms of survival and loco-regional control.
- Modest acceleration of radical radiotherapy without an accompanying reduction in total dose may be superior to conventional fractionation. A reduction in overall treatment time from seven weeks to six weeks achieved by delivering six fractions per week instead of five fractions per week, or by treating patients seven days a week instead of five days per week, or using a concomitant boost over the last 12 treatment days, yielded improved loco-regional control with increased but manageable acute toxicity. Full data on long-term effects are not yet available, but based on the limited evidence that is available from randomized trials the effects appear to be clinically acceptable.

### **Related Guidelines**

Cancer Care Ontario Practice Guidelines Initiative's Practice Guideline Report # 5-6a *Concomitant Chemotherapy and Radiotherapy in Squamous Cell Head and Neck Cancer (Excluding Nasopharynx)* and 5-6b *Hyperfractionated Radiotherapy for Locally Advanced Squamous Cell Carcinoma of the Head and Neck*

### **Prepared by the Head and Neck Cancer Disease Site Group**

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## **PREAMBLE: About Our Practice Guideline Reports**

The Cancer Care Ontario Practice Guidelines Initiative (CCOPGI) is a project supported by Cancer Care Ontario (CCO) and the Ontario Ministry of Health and Long-Term Care, as part of the Program in Evidence-based Care. The purpose of the Program is to improve outcomes for cancer patients, to assist practitioners to apply the best available research evidence to clinical decisions, and to promote responsible use of health care resources. The core activity of the Program is the development of practice guidelines by multidisciplinary Disease Site Groups of the CCOPGI using the methodology of the Practice Guidelines Development Cycle.<sup>1</sup> The resulting practice guideline reports are convenient and up-to-date sources of the best available evidence on clinical topics, developed through systematic reviews, evidence synthesis and input from a broad community of practitioners. They are intended to promote evidence-based practice.

This practice guideline report has been formally approved by the Practice Guidelines Coordinating Committee, whose membership includes oncologists, other health providers, community representatives and Cancer Care Ontario executives. Formal approval of a practice guideline by the Coordinating Committee does not necessarily mean that the practice guideline has been adopted as a practice policy of CCO. The decision to adopt a practice guideline as a practice policy rests with each regional cancer network that is expected to consult with relevant stakeholders, including CCO.

### Reference:

1. Browman GP, Levine MN, Mohide EA, Hayward RSA, Pritchard KI, Gafni A, et al. The practice guidelines development cycle: a conceptual tool for practice guidelines development and implementation. *J Clin Oncol* 1995;13(2):502-12.

**For the most current versions of the guideline reports and information about the CCOPGI and the Program, please visit our Internet site at:**

**<http://www.cancercare.on.ca/ccopgi/>**

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